GERD

GER

This is a common disorder encountered in pediatric practice. It is considered a developmental variation in gastrointestinal motility that resolves as the infant matures.

When GER is unusually severe, persists beyond 18 months of age or is associated with complications it is considered pathologic “GERD” and requires appropriate diagnostic and therapeutic management.

Clinical features

Vomiting may occur immediately or hours after feeding which is usually effortless and painless, consisting of small amount of curdled formula. The vomiting is always non-bilious and rarely contains blood.

In the older child a tendency to vomit easily, heartburn, dysphagia, halitosis, and loss of dental enamel may occur.

Complications

Persistent GER leads to a number of complications:-

1. Blood loss and anemia.
2. Failure to thrive.
3. Peptic esophagitis.
4. Esophageal stricture.
5. Barrett’s esophagus.
6. Aspiration pneumonia and bronchoconstriction.

Diagnosis

History and physical examination.

Barium swallow - anatomic abnormalities.

Overnight PH monitoring for assessing and quantitating GER.

Esophageal manometry measures resting lower end esophageal pressure in addition to esophageal motility.

Endoscopy visualizes mucosa + biopsy

Therapy

Conservative

1. Positioning
2. Dietary changes.

Drugs, antacid, H2 receptors antagonist, and proton pump inhibitors.

Surgery
PEPTIC ULCER DISEASE

In children less than 6 years of age ulcers are found with equal frequencies in boys and girls, a gastric location as common as duodenal, and a precipitating factor is common.

In children older than 6 years ulcers are more frequent in boys and more frequently found in the duodenum.

Clinical features

In neonates, bleeding and perforation are the usual presentations in association with other underlying problems like sepsis, asphyxia or respiratory distress. Older infants and toddlers frequently vomit and eat poorly. Bleeding is also common with equal frequency of primary and secondary ulcers.

In older children pain becomes more important feature, in addition to bleeding.

Diagnosis

Endoscopic evaluation of the upper gastrointestinal tract is preferred because of higher sensitivity in detecting pathology compared with contrast radiology. In addition endoscopy allows for tissue biopsy and evaluation of pattern of inflammation and possible infection (H. pylori).

Therapy

If the ulcer is secondary to an underlying disease, the predisposing factor must be dealt with properly.

The management of the ulcer itself is directed against gastric acid either through neutralization via antacid or suppression of secretion via H2 receptor antagonist or proton pump inhibitors.

Sucralfate can be of benefit by binding to the ulcerated area and possible cytoprotective properties.

Documented H. pylori infection should be treated.

HYPERTROPHIC PYLORIC STENOSIS

Occurs in about 1 in every 500 infant with male to female ratio of 4:1.

Symptoms begin between 2 and 4 weeks of age as projectile non-bilious vomiting. Constipation and poor weight gain may be observed when the diagnosis is delayed. After vomiting the infant is hungry and wants to feed again.

As the vomiting continues a progressive loss of fluid, hydrogen ion and chloride leads to hypochloremic metabolic alkalosis. Serum potassium levels are usually maintained but there may be total body potassium depletion.

Diagnosis

Can be established by palpation of the pyloric mass, a firm, mobile, olive shaped about 2cm in length best palpated from the left side and located above and to the right of the umbilicus in the midepigastrium beneath the liver edge. If the mass cannot be palpated U/S confirms the diagnosis in majority of cases.

Criteria for diagnosis include pyloric mass thickness > 4mm or an overall pyloric length greater than 14mm.

Barium studies when performed show an elongated pyloric channel, a bulge of pyloric muscles in the antrum (shoulder sign), and parallel streaks of barium seen in the narrowed channel “double tract sign”.

Treatment

Correction of fluid, acid base and electrolyte losses with 0.5-0.9% saline in 5-10% glucose with 40meq/L Potassium chloride.

Surgery “Ramstedt’s” Pyloromyotomy.